

vernal pool branchiopods, the valley elderberry longhorn beetle, and the snake and are, therefore, cumulative to the proposed project. Most of these future non-Federal projects are considered

indirect effects of the proposed action and effects are addressed through an interim process of project approval and HCP development.

The Service considered cumulative effects of local actions that are reasonably certain to occur in the action area and region of the proposed project. These actions, particularly those related to the facilitation of planned growth in the region of the proposed project, may affect federally-listed species. The Service considered relevant plans that direct and guide planned growth in the region of the proposed project, including Sutter, Yuba, and Butte Counties. These included:

1. Sutter County: Sutter County General Plan and
2. Yuba County: Yuba County General Plan, Yuba City Urban Area General Plan, City of Marysville General Plan, North Marysville Specific Plan, East Linda Specific Plan, Spring Valley Specific Plan, North Arboga Study Area, Plumas Lake Specific Plan, Yuba County Motorplex, and Yuba County Casino.

As mentioned in the interrelated and interdependent section there are other levee improvement projects planned for the southern part of Yuba County. The only one of these projects that is not a Federal action is the Yuba River South Levee Improvements project. This project may affect valley elderberry longhorn beetle and giant garter snake.

The human population in Yuba County is expected to increase by 48 percent between 1995 and 2015, and most of the growth is expected to occur in the communities of Marysville, Olivehurst, and Linda. The City of Marysville General Plan and the North Marysville Specific Plan detail planned growth, including the development of low- to high-density housing, commercial, and open space, in an area that is almost entirely rice fields. The East Linda Specific Plan provides for planned growth to accommodate a future population increase of 15,580 across a sparsely developed landscape with very little relief and natural features.

Various highway improvement projects in Yuba County, including improvements to SR 70 and the construction of a SR 70 bypass around Marysville, are anticipated to accommodate planned residential and commercial growth along the SR 65 and SR 70 transportation corridors in the vicinity of Olivehurst and Linda. This area is currently pastureland and rice fields, and plans that address development in these areas include the North Arboga Study Area, the Plumas Lake Specific Plan, and the Spring Valley Specific Plan. The North Arboga Study Area plan provides planned community growth of up to 2,500 residential units on 1,300 ac (526 ha) on land that is primarily cultivated in dry land agriculture or rice fields. The Plumas Lake Specific Area Plan provides a plan to accommodate a future increase of 33,000 residents by 2023; the area of future development would cover a 5,200-ac (2,105-ha) area that is primarily dry land agriculture, rice fields, and orchards. Yuba County recently approved a housing development on a 206-ac (83-ha) site that was almost exclusively orchard; this site is located at Feather River Boulevard, north of the Bear River levee. The Spring Valley Specific Plan provides for planned community growth

accommodating 3,503 residential units on 2,450 ac (992 ha) of existing agricultural and range lands. This plan identified 55.5 ac (22.5 ha) of wetlands, including vernal pools, on this site, of which 5.2 ac (2.1 ha) would be potentially affected by plan implementation and development. The Yuba City Urban Area General Plan provides for the preservation of agricultural and the confinement of development to existing developed areas within the City's zone of influence. The Yuba County Motorplex, which would include a racetrack, business park, and golf course, is a possible future development between SR 65 and SR 70. The Yuba County Casino, which is a proposed \$85 million to \$90 million, 150,000-square-foot casino resort, potentially would be located on a 40-ac (16-ha) site 2 miles (3.2 km) east of SR 70 near the intersection of Plumas-Arboga Road and Forty Mile Road.

Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp

Because the vernal pool tadpole shrimp and vernal pool fairy shrimp are endemic to vernal pools in the Central Valley, Coast Ranges, and a limited number of sites in the Transverse Range and Santa Rosa Plateau of California, the Service anticipates that a wide range of activities will affect these species. Such activities include, but are not limited to, urban, water, flood control, highway and utility projects, chemical contaminants, as well as conversion of vernal pools to agricultural use. Many of these activities will be reviewed under section 7 of the Act as a result of the Federal nexus provided by section 404 of the Clean Water Act.

Valley Elderberry Longhorn Beetle

Continued human population growth in the Central Valley, in general, and Yuba County, in particular, is expected to drive further development of agriculture, cities, industry, transportation, and water resources in the foreseeable future. Some of these future activities will not be subject to Federal jurisdiction, and thus are considered to enter into cumulative effects. These future activities are likely to result in loss of riparian and other habitats where elderberry shrubs and the beetle occur.

Many of the activities affecting the beetle may affect elderberry shrubs located within riparian ecosystems adjoining or within jurisdictional wetlands. These projects will be evaluated via formal consultation between the Service and the Corps via the Federal nexus provided by section 404 of the Clean Water Act. There are, however, a number of projects for which there is no need to discharge dredged or fill materials into waters of the U.S. These projects, for which no section 404 permit is required, may lack a Federal nexus and, thus, move forward with no formal consultation. These projects pose a significant threat to the recovery of the beetle, particularly when they result in the removal of elderberry savanna ecosystems. These foothill/upland landscapes often consist of mixed stands of elderberry shrubs and oak (*Quercus* spp.) trees which are interspersed with open grasslands in a savanna-like arrangement.

Elderberry shrubs in these savanna systems often achieve great size, perhaps due to the lack of light competition from broadleaf trees and/or entanglement with California grape (*Vitis californicus*) and/or Himalayan blackberry (*Rubus discolor* syn. *procerus*) vines, as often occurs in riparian communities. Elderberry savanna communities are important in that they

represent a large portion of the diverse habitat in which elderberry shrubs occur and because urban sprawl threatens a significant acreage of these systems. This loss of habitat negatively affects the environmental baseline and is difficult to quantify.

Giant Garter Snake

The Service is aware of other projects currently under review by the State, county, and local authorities where biological surveys have documented the occurrence of federally-listed species. These projects include such actions as urban expansion, water transfer projects that may not have a Federal nexus, and continued agricultural development. The cumulative effects of these known actions pose a significant threat to the eventual recovery of the species. Additionally, an undetermined number of future land use conversions and routine agricultural practices are not subject to Federal permitting processes and may alter the habitat or increase incidental take of snakes, and are, therefore, cumulative to the proposed project. These additional cumulative effects include: (1) unpredictable fluctuations in aquatic habitat due to water management; (2) dredging and clearing of vegetation from irrigation canals; (3) disking or mowing upland habitat; (4) increased vehicular traffic on access roads adjacent to aquatic habitat; (5) use of burrow fumigants on levees and other potential upland refugia; (6) human intrusion into habitat; (7) diversion of water; (8) rip-rapping or lining of canals and stream banks; and (9) use of plastic erosion control netting (Stuart *et al.* 2001). Specific cumulative effects related to the proposed project include maintenance activities and/or an increased potential for vandalism, which may degrade or destroy habitat or cause unpredictable fluctuations in habitat.

Additional cumulative effects to giant garter snakes include unpredictable fluctuations in aquatic habitat due to water management, fluctuations in acreages of rice production due to market conditions or water availability, dredging and clearing vegetation from irrigation canals, disking, mowing, ornamental cultivation, and routine grounds maintenance of upland habitat, use of burrow fumigants on levees and other potential upland refugia, contaminated runoff from agriculture and urbanization, maintenance of non-federal flood control structures, and predation by feral animals and pets.

Conclusion

After reviewing the current status of the giant garter, the environmental baseline for the action area, the effects of the proposed Feather River, Bear River, and Western Pacific Interceptor Canal Levee Improvements project, and the cumulative effects, it is the Service's biological opinion that the proposed action is not likely to jeopardize the continued existence of the vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, and giant garter snake. Critical habitat for the vernal pool fairy shrimp, vernal pool tadpole shrimp and valley elderberry longhorn beetle does not occur in the action area of the project and therefore, will not be adversely modified. No critical habitat has been designated or proposed for the snake; therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

Section 9(a)(1) of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened fish and wildlife species, respectively, without special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by impairing behavioral patterns including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this Incidental Take Statement.

The measures described below are non-discretionary, and must be implemented by the Corps so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps (1) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

Amount or Extent of Take

Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp, and Valley Elderberry Longhorn Beetle

The Service anticipates incidental take of the vernal pool fairy shrimp, vernal pool tadpole shrimp, and valley elderberry longhorn beetle will be difficult to detect or quantify. The cryptic nature of these species and their relatively small body size make the finding of a dead specimen unlikely. The species occur in habitats that make them difficult to detect. Due to the difficulty in quantifying the number of vernal pool crustaceans and beetles that will be taken as a result of the proposed action, the Service is quantifying take incidental to the project as the number of acres of vernal pools/ponded depressions (vernal pool crustacean habitat) and the number of elderberry stems one inch or greater in diameter at ground level (beetle habitat) that will become unsuitable for vernal pool crustaceans and beetles due to direct or indirect effects as a result of the action. Therefore, the Service estimates that all vernal pool fairy shrimp and vernal pool tadpole shrimp inhabiting 9.14 acres of vernal pool habitat and all Beetle inhabiting 21 elderberry plants containing stems 1 inch or greater at ground level (38 stems between 1-3 inches, 4 stems between 3 and 5 inches and 15 stems ≥ 5 inches; see Table 1. in the text) will become unsuitable as a result of the proposed action.

Giant Garter Snake

The Service anticipates that incidental take of the snake will be difficult to detect or quantify for the following reasons: giant garter snakes are cryptically colored, secretive, and known to be sensitive to human activities. Snakes may avoid detection by retreating to burrows, soil crevices, vegetation, or other cover. Individual snakes are difficult to detect unless they are observed, undisturbed, at a distance. Most close-range observations represent chance encounters that are difficult to predict. It is not possible to make an accurate estimate of the number of snakes that will be harassed, harmed or killed during construction activities (staging areas, work on canal banks, soil borrow areas, and vehicle traffic to and from borrow areas). In instances when take is difficult to detect, the Service may estimate take in numbers of species per acre of habitat lost or affected as a result of the action. Therefore, the Service anticipates that all giant garter snakes inhabiting 19.81 acres of aquatic and 24.98 acres of adjacent upland habitat may be harassed, harmed, or killed by loss and destruction of habitat (1 snake), as a result of the project. All giant garter snakes inhabiting 44.79 acres of habitat may be harassed, harmed, or killed by modification and degradation of habitat.

Upon implementation of the following reasonable and prudent measures, incidental take associated with the project on listed vernal pool crustaceans, valley elderberry longhorn beetle, and giant garter snake, in the form of harm, harassment, or mortality from habitat loss or direct mortality will become exempt from the prohibitions described under section 9 of the Act for direct and indirect impacts, except for indirect effects of interrelated actions described on pages 36 and 37. Each of those projects must receive its own incidental take authorization. In addition, incidental take in the form of harm, harassment, or mortality associated with the proposed project will be exempt from the prohibitions described under section 9 of the Act. The incidental take associated with the direct effects of the proposed levee construction is hereby exempted from prohibitions of take under section 9 of the Act. The HCP and interim process will authorize take associated with interrelated/growth induced indirect effects.

Effect of the Take

The Service has determined that this level of anticipated take is not likely to result in jeopardy to the vernal pool tadpole shrimp, vernal pool fairy shrimp, valley elderberry longhorn beetle, and giant garter snake. Critical habitat for the vernal pool fairy shrimp, vernal pool tadpole shrimp and valley elderberry longhorn beetle does not occur in the action area of the project and therefore, will not be adversely modified. No critical habitat has been designated or proposed for the snake; therefore, none will be affected.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the effect of the proposed Feather River, Bear River, and Western Pacific Interceptor Canal Levee Improvements Project on the vernal pool tadpole shrimp, vernal pool fairy shrimp, valley elderberry longhorn beetle, and giant garter snake.

Vernal pool fairy shrimp and vernal pool tadpole shrimp:

1. Adverse effects to listed vernal pool crustaceans, valley elderberry longhorn beetle, and giant garter snake shall be minimized.
2. Impacts of temporary and permanent losses and degradation of habitat of listed vernal pool crustaceans, valley elderberry longhorn beetles, and giant garter snakes shall be minimized and, to the greatest extent practicable, habitat restored to its pre-project condition. Temporal and permanent loss of habitat shall be compensated

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the Corps and TRLIA must ensure compliance with the following terms and conditions, which implement the reasonable and prudent measures described above. The terms and conditions are non-discretionary.

1. The following terms and conditions implement reasonable and prudent measure number one (1):
 - a. The Corps and TRLIA shall assure all conservation measures as proposed by the project proponent as described on pages 7 – 12 of this biological opinion are fully implemented.
 - b. If the project proponent utilizes an outside contractor to implement the project, the project proponent shall include a copy of this biological opinion within its solicitations for construction of the proposed project, making the prime contractor responsible for implementing all requirements and obligations included within the biological opinion, and to educate and inform all other contractors involved in the project as to the requirements of the biological opinion. The project proponents shall make the terms and conditions in this biological opinion a required item in all contracts for the project that are issued by the County to all contractors. The project proponents shall provide the Division Chief of Endangered Species (Central Valley) at the Sacramento Fish and Wildlife Office with a hardcopy of the contract(s) for this project at least ten (10) working days before it is accepted or awarded.
 - c. At least 30 calendar days prior to initiating construction activities, the project proponents shall submit the names and curriculum vitae of the biological monitor(s) for the project. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred.
 - d. A Service-approved biologist must be on-site during all construction-related activities that occur within 250 ft (76 m) of vernal pool branchiopod habitat and within 200 ft (61 m) of aquatic snake habitat, and that could result in the take of these federally-listed species. The written qualifications of the biologist must be

presented to the Service prior to groundbreaking for review and approval prior to any construction-related activities at the project site. The biologist will have the authority to halt any action that might result in take of listed species. If a snake is encountered during construction, all activities will cease until appropriate corrective measures have been completed or until the snake is determined to be unharmed. The biologist will redirect construction activities away from the snake, and the snake will be allowed to move away from the work area on its own. If the biologist exercises this authority, the Service and the CDFG shall be notified by telephone and letter within one (1) working day.

- e. A Worker Environmental Awareness Training Program for construction personnel shall be conducted before the commencement of construction. The program shall provide workers with information on their responsibilities with regard to the listed vernal pool branchiopods and the snake, an overview of the life-history of the species, information on take prohibitions, and an explanation of the relevant terms and conditions of this biological opinion. Written documentation of the training must be submitted to the Sacramento Fish and Wildlife Office within three (3) working days of the completion of instruction.
- f. Prior to groundbreaking, high-visibility fencing that is at least 5 ft (1.5 m) tall shall be placed around vernal pool complexes and snake habitat to prevent encroachment of construction equipment and personnel into the avoidance areas during construction activities. The fencing shall be established at a minimum distance of 250 ft (76 m) from the edge of the vernal pools. Such fencing will be inspected by the on-site biologist at the beginning of each work day and in good condition. The fencing may be removed only when the construction of the project is completed.
- g. During construction operations, the number of access routes, number and size of staging areas, and the total area of the proposed project activity will be limited to the minimum necessary. Routes and boundaries will be clearly demarcated. Movement of heavy equipment to and from the project site will be restricted to established roadways to minimize habitat disturbance, and all vehicle traffic on access road will observe a speed limit of 20 miles per hour. The stockpiling of construction materials, portable equipment, vehicles, and supplies will be restricted to the designated construction staging areas and exclusive of the wetland avoidance areas. All fueling, cleaning, and maintenance of vehicles and other equipment will occur only within designated areas and at least 250 ft (76 m) away from any wetland habitats. The applicant will ensure contamination of habitat does not occur during such operations. All workers will be informed of the importance of preventing spills and appropriate measures to take should a spill occur. Any spills or hazardous materials will be cleaned up immediately. Such spills will be reported in the post-construction compliance reports.
- h. To control erosion during and after implementation of the project, the applicant

will implement BMPs, as identified by the Central Valley Regional Water Quality Control Board. Erosion control measures and BMPs, which retain soil or sediment, runoff from dust control, and hazardous materials on the construction site and prevent these from entering the vernal pool complexes and snake habitat, will be placed, monitored, and maintained throughout the construction operations. These measures and BMPs may include, but are not limited to, silt fencing, sterile hay bales, vegetative strips, and temporary sediment disposal. Plastic monofilament netting (erosion control matting) shall not be used for erosion control because snakes may become entangled in it.

- i. To the extent feasible, the project proponents shall confine clearing of vegetation and scraping, or digging, of soil to the minimal area necessary to facilitate construction activities.
 - j. If requested, during or upon completion of construction activities, the on-site biologist shall accompany Service or CDFG personnel on a on-site inspection of the site to review project effects on listed vernal pool branchiopods, valley elderberry longhorn beetle, and/or giant garter snake.
 - k. The project proponents will maintain and monitor the project site for one calendar year following the completion of construction and restoration activities. Monitoring reports documenting the restoration effort should be submitted to the Service upon the completion of the restoration implementation and one year after the restoration implementation. Monitoring reports should include photo-documentation, when restoration was completed, what materials were used, specified hydroseed mixes, and justifications of any substitutions to the Service-recommended guidelines.
 - l. The Corps and TRLIA shall ensure the applicant complies with the *Reporting Requirements* of this biological opinion.
2. The following terms and conditions implement reasonable and prudent measure number two (2):
- a. Vernal pool fairy shrimp and vernal pool tadpole shrimp
 - i. As described in the biological assessment and in the project description of this biological opinion, at least 30 calendar days after the initiation of groundbreaking, the project proponent will compensate for direct and indirect effects to the habitat of listed vernal pool branchiopods by:
 1. Purchasing 27.42 acres (11.10 ha) of vernal pool habitat within a Service-approved preservation bank.
 2. Purchasing 9.14 acres (3.70 ha) of vernal pool habitat within a

Service-approved creation bank.

- ii. Upon completion of the project, all vernal pool habitats subject to temporary ground disturbances shall be re-contoured, if appropriate, in the opinion of the on-site biologist, and re-vegetated to promote restoration of the area to natural conditions within two (2) working days of completion of the project.

b. Valley elderberry longhorn beetle

- i. In accordance with the Service's *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*, 9 July, 1999, TRLIA shall transplant 21 shrubs, plant 473 elderberry seedlings and 473 associated native species in a Service approved site, protected in perpetuity, or by purchasing 95 credits at a Service-approved valley elderberry longhorn beetle conservation bank.
- ii. TRLIA shall designate a qualified biologist to serve as the on-site monitor. The monitor shall be present on a daily basis during the elderberry transplantation process to ensure the Guidelines are followed. The monitor shall quantify the total stems in the three size classes, and shall note any presence of exit holes. Should the number of stems transplanted require over 473 elderberry seedlings and 473 associated plant seedlings for compensation via the Guidelines, TRLIA shall notify the Service immediately to reinitiate consultation.
- iii. Roadways and disturbed areas within 100 feet of elderberry plants shall be watered at least twice a day to minimize dust emissions.
- iv. Runoff from dust control, and oil or other chemicals used in other construction activities shall be retained in the construction site and prevented from flowing into adjacent vernal pool preserves. The runoff will be retained in the construction site by creating small earthen berms, installing silt fences or hay-bale dikes, or implementing other measures on the construction site to prevent runoff.
- v. A Worker Environmental Awareness Training Program for construction personnel shall be conducted before and during construction. The program shall provide workers with information on their responsibilities with regard to the need to protect the elderberry plants and the beetle, and an overview of the life-history of the beetle. Written documentation of the training shall be transmitted to the Sacramento Fish and Wildlife Office within 30 days of completion of training.

c. Giant garter snake

- i. Within no more than 30 calendar days after groundbreaking and prior to working in giant garter snake habitat, the project applicant shall purchase the equivalent of 134.37 ac (54.38 ha) of snake habitat credits at a Service-approved conservation bank. The amount of snake habitat credits is determined by a 3:1 ratio for permanent effects to 19.81 acres (0.36 ha) of aquatic habitat and 24.98 ac (10.11 ha) of upland habitat along the WPIC and at the Feather River tie-in. All replacement habitat shall include both upland and aquatic habitat components at a ratio of 2:1 upland acres to aquatic acres.
- ii. Construction activity within snake habitat shall be conducted between May 1 and October 1 except for work near the Feather River levee. May 1 to October 1 is the active period for the snake and direct mortality is lessened, because snakes are expected to actively move and avoid danger. Construction may occur in the area near the Feather River levee provided the project proponents have had ground disturbing activity occurring two weeks prior to October 1, fence the giant garter snake areas two weeks prior to October 1, provide a biological monitor to be present at the site everyday and conduct a survey every morning prior to the beginning of construction, and complete construction by November 1.
- iii. Aquatic habitat will be dewatered, if required by project needs, for 15 days after April 15 and prior to the initiation of construction activities, including the trenching and backfilling of snake habitat. If complete dewatering is not possible, potential snake prey (*i.e.*, fish and tadpoles) will be removed so that snakes and other wildlife are not attracted to the construction area.
- iv. The project area shall be surveyed by a Service-approved biologist for snakes no more than 24 hours prior to commencement of construction activities. Surveys of the project area will be repeated if a lapse in construction activity of two (2) weeks or greater occurs.
- v. To avoid attraction of predators that may feed on the snake, garbage shall be removed from the construction area daily and disposed of at an appropriate site. All litter, debris, and unused materials, equipment, or supplies must be removed from the construction staging areas at the end each day during project construction.
- vi. Upon completion of this project, snake habitat temporarily affected by a single season in the project area, including 95.76 acres (38.75 ha) of upland habitat, shall be re-contoured, if appropriate, and re-vegetated with appropriate locally-collected native plant species to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance includes any area that is disturbed during the project, but that, after project completion, will

not be subject to further disturbance and has the potential to be re-vegetated. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site-specific basis in consultation with the Service and the CDFG. Restoration work may include replanting emergent vegetation. Refer to the enclosed Service's *Guidelines for the Restoration and/or Replacement of Giant Garter Snake Habitat*. A written report shall be submitted to the Service within ten (10) working days of the completion of construction at the project site.

Reporting Requirements

A post-construction compliance report prepared by the monitoring biologists must be submitted to the Chief of the Endangered Species Division (Central Valley) at the Sacramento Fish and Wildlife Office within thirty (30) calendar days of the completion of construction activity or within thirty (30) calendar days of any break in construction activity lasting more than thirty (30) calendar days. This report shall detail (i) dates that groundbreaking at the project started and the project was completed; (ii) pertinent information concerning the success of the project in meeting compensation and other conservation measures; (iii) an explanation of failure to meet such measures, if any; (iv) known project effects on the giant garter snake, if any; (v) occurrences of incidental take of any these species; and (vi) other pertinent information.

The Corps must require TRLIA to report to the Service immediately any information about take or suspected take of federally listed species not authorized in this biological opinion. TRLIA must notify the Service within 24 hours of receiving such information. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal. In the case of a dead animal, the individual animal should be preserved, as appropriate, and held in a secure location until instructions are received from the Service regarding the disposition of the specimen or the Service takes custody of the specimen. The Service contact persons are Chief of the Endangered Species Division (Central Valley) at (916) 414-6600, and Scott Heard, Resident Agent-in-charge of the Service's Law Enforcement Division at (916) 414-6660.

Any contractor or employee who during routine operations and maintenance activities inadvertently kills or injures a listed wildlife species must immediately report the incident to their representative. This representative must contact the CDFG immediately in the case of a dead or injured listed species. The CDFG contact for immediate assistance is State Dispatch at (916) 445-0045.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities that can be implemented to further the purposes of the Act, such as preservation of endangered species habitat, implementation of recovery actions, or development of information and data bases.

1. It is recommended that the Corps work with the Service to address significant, unavoidable environmental impacts resulting from projects proposed by non-Federal parties.
2. It is recommended that TRLIA incorporate into bidding documents the enclosed *Standard Avoidance and Minimization Measures for Construction Activities in Giant Garter Snake Habitat* when appropriate.
3. It is recommended that the TRLIA protect and restore riparian and wetland habitats in the Sacramento River basin, including the Bear River Conservation Area, to increase habitat for the valley elderberry longhorn beetle and giant garter snake.
4. It is recommended that the Corps assist in the implementation of the recovery plans for listed vernal pool crustaceans, valley elderberry longhorn beetle, and the giant garter snake.
5. It is recommended that the TRLIA should develop and implement operations and maintenance standards to minimize effects of maintenance activities on vernal pool crustacean habitat, the valley elderberry longhorn beetle, giant garter snake, and riparian habitats.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

RE-INITIATION--CLOSING STATEMENT

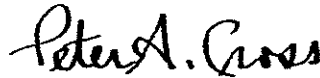
This concludes formal consultation on the proposed Feather River, Bear River, and Western Pacific Interceptor Canal Levee Improvements Project. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or, (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Mr. Tom Cavanaugh

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Please contact Jennifer Hobbs or the Acting Sacramento Valley Branch Chief of my staff at (916) 414-6600 if you have questions regarding this biological opinion.

Sincerely,



Ken Sanchez
for Acting Field Supervisor

Enclosure

cc:

John Nelson, California Department of Fish and Game, Region 2, Rancho Cordova, California
Chris Elliot, Jones and Stokes, Sacramento, California
Roberta Childers, EDAW Inc., Sacramento, California

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PERSONAL COMMUNICATIONS

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Attachment C

**US Fish and Wildlife Service
Biological Opinion
1-1-06-F-0026
Stage 2 Work Activities
January 9, 2006**



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



In reply refer to:
1-1-06-F-0026

JAN 9 2006

Mr. Tom Cavanaugh
Chief, Sacramento Valley Office
Department of the Army
U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814-2922

Subject: Review of the Feather-Bear-Western Pacific Interceptor Canal Levee Improvement Project - Stage 2 (Corps # 200400685) Yuba County, California, for Inclusion with the Valley Elderberry Longhorn Beetle Programmatic Consultation (1-1-96-F-66) and with the Giant Garter Snake Programmatic Consultation (1-1-97-F-149)

Dear Mr. Cavanaugh:

This letter responds to your December 8, 2005, request for initiation of formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Feather-Bear-Western Pacific Interceptor Canal Levee Improvement Project - Stage 2, Yuba County, California (proposed project). Although your U.S. Army Corps of Engineers (Corps) request did not include a request to append this project to the Service's September 19, 1996, *Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle Within the Jurisdiction of the Sacramento Field Office, California* (1-1-96-F-001) (VELB Programmatic Consultation) or the November 13, 1997, *Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake* (Giant Garter Snake Programmatic Consultation), the Service has decided that this proposed project can be appended to the VELB and Giant Garter Snake Programmatic Consultations. The Service has reviewed the biological information submitted by your office describing the effects of the proposed Feather-Bear-Western Pacific Interceptor Canal Levee Improvement Project - Stage 2 on the threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle) and the threatened giant garter snake (*Thamnophis gigas*) (snake). This response is in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.* Act).

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The findings and recommendations in this consultation are based on: (1) a December 8, 2005, letter from the Corps initiating consultation with the Service; (2) a Biological Assessment dated, November 30, 2005, from EDAW; and (3) information available to the Service.

This project consists of the second phase (Stage 2) of the Bear River levee setback project. A biological opinion was prepared for Stage 1 project effects on August 10, 2005 (1-1-05-F-0106). Stage 2 activities include: construction of the embankment of the lower Bear River setback levee; degradation of portions of the existing lower Bear and Feather River levees; removal of approximately 166 acres of orchard in the lower Bear River floodway; and restoration of native habitat types in the Bear River floodway and recontouring and restoration of native habitat types on agricultural and developed lands in the levee setback area, including construction of a floodplain swale.

The foundation for the setback levee was completed as part of Stage 1 construction activities. The levee itself will have a crown width of 20 feet with waterside and landside slopes of 3:1. The levee height would range from about 18 feet to 30 feet above existing ground surface with an average height of about 25 feet. A waterside berm would be constructed west of setback levee station 60+00 to allow the placement of excess soil from required excavations. In addition, a landside stability berm with maximum width of 50 feet and maximum height of 20 feet would be constructed along segments of the western portion of the levee setback alignment.

Portions of the existing Bear River and Feather River levees would be degraded to allow water to flow into the setback area during high river stages. Two segments of the Bear River levee, totaling about 7,900 lineal feet, would be degraded to elevations ranging from 30 to 44 feet. The southern 1,500 feet of the Feather River levee would be degraded to an elevation of about 33 to 35 to facilitate hydraulic and ecological connectivity between the setback area and the adjacent Lake of the Woods Unit of DFG's Feather River Wildlife Area. In addition, a 200-foot notch would be cut in the Feather River levee near the tie-in with the Bear River setback levee.

Stage 2 also includes removal of 166 acres of walnut orchard in the Bear River floodway and replacement of the orchard with native habitat types. The operation would commence in spring 2006, as soon as practicable following the flood season to allow enough time for debris removal, site preparation, soil stabilization, and establishment of new plantings before the 2006/07 flood season.

The levee setback area consists of 145 acres of orchards and 110 acres of field crops and fallow and developed areas. The levee setback area, remnants of the existing levees, areas where the existing levee would have been degraded, and the orchard removal area within the Bear River floodway would be restored to native habitat covertypes through active planting. The primary goals of the habitat restoration are: enhance and restore fish, wildlife, and riparian habitat within the levee setback area; maximize a variety of riparian plant communities and other floodplain habitat types; meet hydraulic roughness value objectives in the expanded floodway; enhance connectivity between adjacent riparian habitats and river channels; minimize long-term

operations and maintenance costs; minimize the potential for fish stranding; provide mitigation for some terrestrial resource impacts of Stage 1; and provide protection for a known archaeological site within the levee setback area. Elderberry shrub transplants and seedlings necessary for compensation for this project and Stage 1 will be included in the setback levee area.

One elderberry shrub (shrub #4) will be transplanted between November and February 15. There are 18 stems greater than 1 inch and less than 3 inches in diameter at ground level. No exit holes were observed and the shrub is not located in riparian habitat. The applicant has proposed to transplant the shrub and plant 18 elderberry seedlings and 18 associated natives within the setback levee area. A total of 20 additional shrubs are located within 100 feet of project construction. These shrubs will be fenced and construction would occur at least 10 feet away from the elderberry shrub.

Giant garter snake aquatic habitat is present within Clark Slough and there is a connection of this slough to the Algodon Slough that has a giant garter snake occurrence in the CNDDDB. Additional giant garter snake aquatic habitat occurs in a drainage ditch south of Clark Slough. Effects from the project occurred under Stage 1 were compensated under that biological opinion and a description of these effects can be found in that biological opinion. Effects from Stage 2 construction activities to giant garter snake habitat include construction of an outfall into Clark Slough (0.003 acre) and borrow from agricultural fields within 200 feet of aquatic snake habitat. Construction of the outfall would occur in an area that is covered in riprap.

The Service has determined that it is appropriate to append the proposed Feather-Bear-Western Pacific Interceptor Canal Levee Improvement Project - Stage 2 to the VELB and Giant Garter Snake Programmatic Consultations. This letter is an agreement by the Service to append the proposed Feather-Bear-Western Pacific Interceptor Canal Levee Improvement Project - Stage 2 to the VELB and Giant Garter Snake Programmatic Consultations and represents the Service's biological opinion on the effects of the proposed action. Conservation measures for projects appended to the VELB and Giant Garter Snake Programmatic Consultations involve the use of creation and preservation banks or species funds in combination with on-site conservation options where such options are appropriate.

The Service reevaluates the effectiveness of the VELB and Giant Garter Snake Programmatic Consultations at least every six (6) months to ensure that continued implementation will not result in unacceptable impacts to the ecosystem upon which the listed species depend.

Valley Elderberry Longhorn Beetle Conservation Measures

The Service has determined that it is appropriate to append this proposed project to the Service's VELB Programmatic Consultation. This letter is an agreement by the Service to append the Feather-Bear-Western Pacific Interceptor Canal Levee Improvement Project - Stage 2 to the VELB Programmatic Consultation and represents the Service's biological opinion on the effects of the action. Compensation for projects appended to the VELB Programmatic Consultation

involves adhering to the Service's *Conservation Guidelines for the Valley Elderberry Longhorn Beetle (Guidelines)*, dated July 9, 1999, except as approved by the Service.

In accordance with the VELB Programmatic Consultation, projects that are appended to the VELB Programmatic Consultation will be compensated according to these *Guidelines* unless otherwise approved by the Service. The compensation identified in the VELB Programmatic Consultation includes the following:

1. transplant unavoided elderberry shrubs during the shrubs' dormant period; and
2. plant additional seedlings as described in the *Guidelines* and provide protection of the Conservation Area in perpetuity.

The proposed project may incidentally take all valley elderberry longhorn beetles inhabiting one elderberry shrub with of a total of 18 stems measuring between 1 and 3 inches at ground level.

As per the *Guidelines* of July 9, 1999, the applicant agrees to transplant the elderberry shrub to the setback levee area and plant 18 elderberry seedlings and 18 associated natives around the transplants. The applicant intends to plant more than 15,000 elderberry seedlings within the setback levee area as part of the restoration effort.

Giant Garter Snake Conservation Measures

Conservation measures for projects appended to the Snake Programmatic Consultation involve adhering to the *Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat (Guidelines)*, the *Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake Habitat (Avoidance Measures)*, and the terms and conditions of the Snake Programmatic Consultation, except as approved by the Service. A copy of the *Guidelines* and *Avoidance Measures* are found as appendices to the Snake Programmatic Consultation for the snake and are available from the Service upon request.

The Snake Programmatic Consultation identifies three levels of project impacts and appropriate conservation measures for each impact level (pp. 4-8). It is the Service's intent that following these *Guidelines* and *Avoidance Measures* will reduce habitat degradation while increasing the protected habitat areas across the species' range. These measures include the following:

1. avoidance of take and disturbance of habitat (Levels 1, 2, and 3);
2. minimization of disturbance and habitat loss (Levels 1, 2, and 3);
3. restoration of temporary habitat disturbance and associated impacts to snake habitat (Levels 1 and 2);
4. replacement of permanent and temporal habitat loss (Levels 2 and 3);

- ~~5. management and monitoring of restored and replacement habitat (Levels 1, 2, and 3); and~~
6. a management plan for the long-term protection of the restored and replaced habitat area(s) to protect the area(s) in perpetuity as habitat for the snake (Levels 2 and 3).

The agreed upon conservation responsibilities of the applicant are as follows:

Level 1 effects: The applicant shall restore all temporarily disturbed snake habitat, which includes upland habitat where borrow material is removed.

The applicant shall also adhere to the avoidance and minimization measures described in both the November 2005 *Feather-Bear-Western Pacific Interceptor Canal Levee Improvements Project – Stage 2 Biological Assessment* and the Service's Avoidance Measures, and the terms and conditions of the Snake Programmatic Consultation.

This concludes the Service's review of the proposed Feather-Bear-Western Pacific Interceptor Canal Levee Improvement Project - Stage 2 outlined in the request for formal consultation. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion, (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this letter, please contact Jennifer Hobbs or the Acting Sacramento Valley Branch Chief, Mary Hammer (916) 414-6645.

Sincerely,



Peter Cross, Chief
Endangered Species Division

cc:

ARD (ES) Portland, OR

Roberta Childers, EDAW, Sacramento, CA

Charles K. McClain, Three Rivers Levee Improvement Authority, Marysville, CA

Attachment D

**US Fish and Wildlife Service
Biological Opinion Amendment
1-1-06-F-0101
Stage 1 Work Activities
June 16, 2006**



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



In reply refer to:
1-1-06-F-0101

JUN 16 2006

Mr. Tom Cavanaugh
Sacramento Valley Office Chief
U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814-2922

Subject: Amendment to the Biological Opinion (Service file number 1-1-05-F-0106) for the Feather River, Bear River, and Western Pacific Interceptor Canal Levee Improvements Project (Corps file number 200400685), Yuba County, California

Dear Mr. Cavanaugh:

This letter is in response to the U.S. Army Corps of Engineers (Corps) request for reinitiation of section 7 consultation with the U.S. Fish and Wildlife Service (Service) on the Feather River, Bear River, and Western Pacific Interceptor Canal (WPIC) Levee Improvements Project (proposed project) in Yuba County, California. Your April 11, 2006, request was received in our office on April 14, 2006. This amended biological opinion addresses the changes in the project schedule, proposed modifications to the project design at Algodon Canal and on the Bear River and WPIC levees, summarizes effects to valley elderberry longhorn beetles (*Desmocerus californicus dimorphus*) not authorized in the previous biological opinion, and updates decisions made on compensation sites for 2005 work authorized under the biological opinion. This amended biological opinion is issued under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)(Act).

The findings and recommendations in this consultation are based on: (1) the April 11, 2006, letter from the Corps reinitiating section 7 consultation on this project; (2) an updated biological assessment prepared by Jones and Stokes, dated March 22, 2006; and (3) other information available to the Service.

**TAKE PRIDE
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Therefore, the August 10, 2005, biological opinion is now amended as follows:

Page 3: Change Project Description under Orchard Removal:

Replace this sentence:

Approximately 252 acres would be removed and replaced with a native land cover type.

With:

Under Stage 1 of the project, approximately 68 acres would be removed and replaced with native land cover type. The remaining acres would be removed under Stage 2, and will be addressed under a separate consultation.

Page 5: Change Project Description under Relocate Pump Station #6 to include:

In addition to relocating Pump Station No. 6, the pumps would be increased to allow Reclamation District 784 to increase the interior drainage pumping capacity from 50 cfs to 200 cfs. Four pumps would replace the existing one pump in order to accommodate the increased pumping capacity. The overall length of Pump Station No. 6 would increase an additional 11.3 feet north of the currently located pump station, resulting in the permanent loss of 0.01 acre of aquatic giant garter snake habitat.

Pages 5 and 6: Add Culvert Repairs and Upgrades and Algodon Canal Dewatering to Project Description:

Algodon Canal – Feather River Boulevard Culvert Repairs and Upgrades

Two existing culverts within Algodon Canal located under Feather River Boulevard are damaged and partially filled with sediments. These culverts would be repaired and sediment would be removed. Culvert maintenance would include cleaning out sediment and debris within the culverts with high pressure washing equipment.

A trash rack will be constructed upstream of the culverts. A final design is pending but is expected to include the construction of a steel beam cat-walk approximately 25 feet upstream of Feather River Boulevard. The steel beams would be placed perpendicular to the canal and would be embedded into the bank above the ordinary high water mark. A metal trash rack that extends into the canal will be placed on the upstream face of the cat-walk.

Work would be limited to the banks of the canal and 25 feet upstream and downstream of the culverts. Cofferdams would be placed to isolate the sluicing disturbance. The material sluiced from the culverts would be removed by backhoe and placed at the top of the bank. The material would be deposited in an upland location at least 200 feet away

from aquatic giant garter snake habitat. Approximately 0.04 acre of the Algodon Canal would be temporarily disturbed and dewatered.

Algodon Canal - Dewatering

Dewatering of Algodon Canal will be required to construct Pump Station No. 6 and to implement the Feather River Boulevard culvert repairs and upgrades. Three cofferdams would be constructed: one north of the new pump station location, one south of Feather River Boulevard and one north of Feather River Boulevard. The area affected by cofferdam construction and dewatering around Feather River Boulevard would be approximately 0.04 acre. The area affected by cofferdam construction and dewatering in the area immediately upstream of Pump Station No. 6 has already been covered in this document. Temporary pumps would be used to dewater the area adjacent to Feather River Boulevard. Water removed would be spray discharged to uplands outside of giant garter snake habitat or allowed to settle in upland tanks or sumps and then allowed to infiltrate back into the soil or discharged back into Algodon Canal upon meeting regional water quality standards. Algodon Canal is a mostly stagnant waterbody that flows to the Bear River only when Pump Station No. 6 is operating.

Page 6: Add Widen Bear River Levee to Project Description: Widen Bear River Levee

At the Bear River, between station 122+00 and 140+00, the waterside of the levee will need to be widened approximately 2.0 feet to accommodate the placement of additional material on the levee crown. As a result, approximately 0.08 acre of the Bear River floodway (a water of the U.S.) would be lost. This represents an additional discharge of fill material to waters of the U.S. than what was previously permitted. All work will occur with the construction easements previously identified.

Page 8: Change Project Description under Implement Erosion Control Measures to include:

At the Western Pacific Interceptor Levee, between stations 250+00 and 276+00, riprap will need to be placed on the waterside of the levee to repair erosion that occurred in January 2000. The levee in this location was subject to wind and wave action during the high-water events and water was observed splashing over the levee top. The additional riprap is necessary to repair areas of bank scour and to dissipate wave energy. An additional 2,900 cubic yards of riprap would be placed on 2,600 linear feet of the levee at this location. Approximately 0.24 acre of aquatic giant garter snake habitat would be affected.

Levee slope flattening is necessary between stations 261+00 and 274+00 to maintain a 3:1 or flatter waterside slope. To complete levee slope flattening, 0.75-inch rock will be imported and placed into the WPIC to provide a solid base for the increased levee section. Imported fill material that meets levee embankment requirements for permeability and

durability will be used. Approximately 0.37 acre of aquatic giant garter snake habitat would be affected.

Page 8: Change Proposed Conservation Measures under Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp Number 1 to:

1. Compensation at a ratio of 1:1 for creation and 3:1 for preservation will be done at a Service approved compensation site for direct effects. Indirect effects will be compensated at a ratio of 3:1 preservation at a Service approved compensation site.

Page 10: Add the following to the Proposed Conservation Measures under Valley Elderberry Longhorn Beetle Number 4:

Because a number of shrubs would not be transplanted, the number of additional elderberry seedlings and associated native plantings will be increased an additional 3 times the normal compensation ratios. The final number of elderberry seedlings and associated natives planted in fall of 2006 will be increased by 7.5 times.

Page 11: Add the following to the Proposed Conservation Measures under Valley Elderberry Longhorn Beetle:

7. Management of the valley elderberry longhorn beetle conservation area shall be consistent with Conservation Guidelines except for the following changes. In areas where the conservation area shall become riparian habitat planting densities shall include 10 plants per 1,800 square feet, however when appropriate depending on location, site conditions, and/or habitat type lower density planting would be done. Because the compensation area is surrounded by a restoration area it would not be necessary to maintain a buffer around or fence the compensation area. Individual watering basins would not be put in because the elderberry site would be watered as part of the larger restoration area through flood and drip irrigation. Prior to herbaceous vegetation establishment, herbicides and mowing would be used within 100 feet of elderberry shrubs during the growing season. After the establishment of herbaceous vegetation weed control would be limited to mowing and wicking with an herbicide.

Page 12: Change Proposed Conservation Measures under Giant Garter Snake Number 14 to:

1. Permanent loss of giant garter snake habitat will be compensated for at a ratio of 3:1 at a Service approved compensation site.

Page 34: Under Valley Elderberry Longhorn Beetle, Direct Effects Change the second sentence to read:

The proposed project will require the removal of 27 elderberry shrubs, only one of the shrubs has exit holes. In total, the proposed project would adversely affect 110 elderberry shrub stems one inch or greater in diameter at ground level by removal of these shrubs. Because the elderberry shrubs will be transplanted outside of the transplant window described in the Conservation Guidelines, the shrubs would suffer from additional stress. Transplanting shrubs in August when temperatures typically reach 100 degrees, causes stress to the shrub and increased likelihood of mortality. Additionally, TRILIA and the

contractor have concluded that some of the shrubs would not be able to be transplanted. Twenty shrubs would not be transplanted and seven would be transplanted. When shrubs are not transplanted there is a greater loss because shrubs may contain larvae of the beetle which can help repopulate the area in which the shrub is transplanted.

Page 35: Replace Table 1 with the Following Table:

Location	Stems (maximum diameter at ground level)	Exit Hole on Shrub (Yes or No)	Elderberry Seedling Ratio	Associated Native Plant Ratio	Number of Stems Observed	Required Elderberry Plantings	Required Associated Native Plant Plantings
Non-riparian	stems $\geq 1"$ & $\leq 3"$	No	1:1	1:1	32	32	32
		Yes	2:1	2:1	0	0	0
Non-riparian	stems $> 3"$ & $< 5"$	No	2:1	1:1	1	2	2
		Yes	4:1	2:1	0	0	0
Non-riparian	stems $\geq 5"$	No	3:1	1:1	10	30	30
		Yes	6:1	2:1	0	0	0
Riparian	stems $\geq 1"$ & $\leq 3"$	No	2:1	1:1	55	110	110
		Yes	4:1	2:1	3	12	24
Riparian	stems $> 3"$ & $< 5"$	No	3:1	1:1	4	12	12
		Yes	6:1	2:1	0	0	0
Riparian	stems $\geq 5"$	No	4:1	1:1	5	20	20
		Yes	8:1	2:1	0	0	0
Total replacement plantings						218	230
Replacement plantings with 7.5 increase						1635	1725
Total elderberry shrubs to be transplanted						7	
Total elderberry shrubs removed (not transplanted)						20	
336 valley elderberry longhorn units or 13.88 acres							

Page 36: Change the Third Paragraph under Giant Garter Snake Direct Effects to: Filling the borrow ditch, widening the WPIC levee, removing sediment from the Algodon Canal, enlarging Pump Station No. 6, and placing riprap in the WPIC would permanently remove 25.04 acres of upland and 20.43 acres of aquatic habitat and temporarily disturb another 95.76 acres of upland and 0.4 acre of aquatic habitat. The aquatic habitat provides water during the snake's active period, and the uplands provide habitat for basking, cover, and retreat sites, and higher elevation upland cover and refuge from flood waters. After completion of construction the area along the WPIC and Algodon Canal would be restored to preexisting condition. Additionally, 136.41 acres of giant garter

snake habitat will be restored at a Service approved compensation site by the project proponent.

Page 41: Under Amount or Extent of Take, Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp, and Valley Elderberry Longhorn Beetle, change the last sentence to:

Therefore, the Service estimates that all vernal pool fairy shrimp and vernal pool tadpole shrimp inhabiting 9.14 acres of vernal pool habitat and all beetles inhabiting 27 elderberry plants containing stems 1 inch or greater at ground level (90 stems between 1-3 inches, 5 stems between 3 and 5 inches, and 15 stems greater than 5 inches; see Table 1 in text) will become unsuitable as a result of the proposed action.

Page 42: Under Giant Garter Snake Change First Paragraph, Last Two Sentences to:

Therefore, the Service anticipates that all giant garter snakes inhabiting 20.43 acres of aquatic and 25.04 acres of adjacent upland habitat may be harassed, harmed, or killed by loss and destruction of habitat (1 snake), as a result of the project. All giant garter snakes inhabiting 45.10 acres of habitat may be harassed, harmed, or killed by modification and degradation of habitat.

Page 45: Change Term and Condition 2.a.i. to:

i. As described in the biological assessment and in the project description of this biological opinion, the project proponent will compensate for direct and indirect effects to the habitat of listed vernal pool branchiopods by:

1. Purchasing 27.42 acres (11.10 ha) of vernal pool habitat at a Service-approved preservation site.
2. Purchasing 9.14 acres (3.70 ha) of vernal pool habitat at a Service approved restoration/creation site.

Page 47: Change Term and Condition c. i. and vi.:

i. The project applicant shall provide 136.41 acres of giant garter snake compensation at a Service-approved site. The amount of snake habitat is determined by a 3:1 ratio for permanent effects to 20.43 acres of aquatic habitat and 25.04 acres of upland habitat along the WPIC, Feather River tie-in, and Algodon Canal. All replacement habitat shall include both upland and aquatic habitat components at a ratio of 2:1 upland acres to 1:1 aquatic acre.

vi. Upon completion of this project, snake habitat temporarily affected by a single season including 95.76 acres of upland and 0.4 acre of aquatic habitat shall be re-contoured if appropriate, and re-vegetated with appropriate locally-collected native plant species to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance includes any area that is disturbed during the project, but that, after project completion, will not be subject to further disturbance and has the potential to be re-vegetated. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site-specific basis in cooperation with the Service and the CDFG.

Mr. Tom Cavanaugh

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Restoration work may include replanting emergent vegetation. Refer to the Service's *Guidelines for the Restoration and/or Replacement of Giant Garter Snake Habitat*. A written report shall be submitted to the Service within ten (10) working days of the completion of construction at the project site.

The other portions of the project description, species baseline, effects analysis, conclusion, reasonable and prudent measures, and conservation recommendations in the August 10, 2005, biological opinion remain the same.

This concludes formal consultation with the Corps on the amended Feather River, Bear River, and Western Pacific Interceptor Canal Levee Improvements Project. As provided in 50 CFR §402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending re-initiation.

Please contact Jennifer Hobbs, or Holly Herod, the Sacramento Valley Branch Chief, of my staff at (916) 414-6645 if you have questions regarding this amendment to the biological opinion for the Feather River, Bear River, and Western Pacific Interceptor Canal Levee Improvements Project.

Sincerely,

Peter A. Cross

Kenneth Sanchez
for Acting Field Supervisor

cc:

Ian Drury, California Department of Fish and Game, Ranch Cordova, California
Harry Oaks, Jones and Stokes Associates, Sacramento, California

Attachment E

**US Fish and Wildlife Service
Biological Opinion Amendment
1-1-06-F-0255
Stage 1 and Stage 2 Work Activities
October 1, 2006**



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



In reply refer to:
1-1-06-F-0255

OCT 1 2006

Mr. Tom Cavanaugh
Sacramento Valley Office Chief
U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814-2922

Subject: Amendment to the Biological Opinions (Service file number 1-1-05-F-0106 and 1-1-06-F-0026) for the Feather River, Bear River, and Western Pacific Interceptor Canal Levee Improvements Project Stage 1 and Stage 2 (Corps file number 200400685), Yuba County, California

Dear Mr. Cavanaugh:

This letter is in response to the U.S. Army Corps of Engineers (Corps) request for reinitiation of section 7 consultation with the U.S. Fish and Wildlife Service (Service) on the Feather River, Bear River, and Western Pacific Interceptor Canal (WPIC) Levee Improvements Project (proposed project) in Yuba County, California. Your September 7, 2006, request was received in our office on September 13, 2006. This amended biological opinion addresses the changes in the project descriptions including a description of long-term operations, maintenance, and vegetation management of the newly setback area and summarizes effects to valley elderberry longhorn beetles (*Desmocerus californicus dimorphus*) not analyzed in the previous biological opinions. This amended biological opinion is issued under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)(Act).

In August of 2005, the Service issued a biological opinion (1-1-05-F-0106) on Stage 1 of the Feather River, Bear River, and WPIC Levee Improvements Project. This portion of the overall project included doing levee repair along the WPIC, constructing a detention basin, relocating a pump station, levee work on portions of the Bear River, and construction of a setback levee along the Bear River. Stage 2 of the proposed project included construction of the embankment of the lower Bear River setback levee, degradation of portions of the existing lower Bear and Feather River levees, removal of 166 acres of orchard in the Bear River floodway, and restoration of native habitat types in the Bear River floodway including construction of a floodplain swale (1-1-06-F-0026). Because the change in the project description actually involves both biological opinions this one amendment will amend both biological opinions.

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Mr. Tom Cavanaugh

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The findings and recommendations in this consultation are based on: (1) the September 7, 2006, letter from the Corps reinitiating section 7 consultation on these two projects; (2) a letter from EDAW Inc. describing the project description changes, dated August 22, 2006; (3) a draft *Operations and Maintenance Plan for Riparian and Upland Habitats and Mitigation Features of the Bear River Setback Levee Project* prepared by River Partners; and (4) other information available to the Service.

Therefore, the August 10, 2005 (1-1-05-F-0106), and January 9, 2006 (1-1-06-F-0026), biological opinions are now amended as follows:

1-1-05-F-0106 - Page 8 and 1-1-06-F-0026 - Page 2: Add following to Project Description:

Long-Term Operations, Maintenance, and Vegetation Management

Future routine maintenance of the Preserve will include preventing woody plants and non-native species from becoming established in the grassland/savanna habitat that will be planted in the upper 83 acres of the restoration area to maintain the design conveyance capacity in this more constricted portion of the floodway. This is proposed to be accomplished through regular mowing and spot herbicide applications. In addition, it is proposed that woody species and weeds be prevented from becoming established in the floodplain swale created as part of the levee setback project near the confluence of the Bear and Feather Rivers to prevent fish stranding. Except in these two areas, the restoration planting is expected to result in dense vegetative growth requiring little intervention. Routine management actions in the areas of dense woody vegetation are expected to be limited to selective clearing of debris, trash removal, and management of non-native vegetation through spot-spraying of herbicides.

RD 784 will conduct regular maintenance of the setback levee, including mowing, cutting, burning, or spraying herbicides on weeds, grasses, shrubs and woody growth on the levee and within a 50-foot-wide access corridor at the waterside toe as required to facilitate safety inspections. Because restoration plantings will not be installed within this maintenance zone, vegetation management within this area will be minimal and will be conducted on a regular basis to ensure that woody growth does not become established on the levee and require more intensive future management.

The Reclamation Board requires that allowance be made for potential removal of vegetation in the project area in order to meet flood conveyance objectives. Specifically, the encroachment permit issued to TRLIA by the Reclamation Board specifies that "[n]o elderberry shrubs shall be planted at the project site until an agreement has been obtained from the U.S. Fish and Wildlife Service and approved by the Reclamation Board that allows for maintenance for flood conveyance purposes to occur within the channel without requiring mitigation." Because the Preserve is at the confluence of the Bear and Feather Rivers, it will be subject to a backwater effect from the Feather River during high flows. The project design accounts for flood surface elevations associated with Feather River backwater flows and Bear River floodwaters and the effects of dense riparian vegetation on flow velocity in the expanded Bear River floodway. Therefore, based on

Mr. Tom Cavanaugh

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extensive hydrologic modeling by TRLIA's engineers, it is very unlikely that removal of vegetation within the floodway will be required to meet flood conveyance needs, and removal of vegetation for flood-conveyance purposes is not proposed or anticipated by TRLIA except in the grassland/savanna habitat at the upstream end of the Preserve where regular mowing and woody vegetation removal is also required to maintain the grassland habitat values.

Although removal of elderberry shrubs is not anticipated to be required, TRLIA cannot entirely rule out the possibility that extraordinary maintenance activities may be conducted in the future to remove vegetative material that interferes with meeting required flood conveyance parameters. These extraordinary maintenance activities could require removal of some shrubs that will be planted to fulfill mitigation requirements and those planted as part of general restoration activities. The 1,661 elderberry shrubs planted for compensation of project effects will be located in a manner that minimizes potential for these shrubs to be affected by such activities. However, there is some potential for these or some of the other approximately 15,000 additional elderberry shrubs and restored native vegetation to be subject to cutting or removal for flood conveyance.

1-1-05-F-0106 - Page 11 and 1-1-06-F-0026 - Page 4: Add the following Conservation Measures under Valley Elderberry Longhorn Beetle:

8. If flood conveyance improvements are required within the Preserve, areas temporarily disturbed during these activities that do not require continued management would be restored with the original vegetation species mix.
9. A qualified biologist familiar with elderberry shrubs shall be retained for consultation prior to the initiation of flood conveyance improvement activities and shall have the authority to choose access routes. Access routes, staging areas, and all project activities should be chosen in a manner that will cause the least amount of damage to beetle habitat. Removal of elderberry shrubs should be limited to the minimum necessary to achieve flood conveyance requirements.
10. Prior to any extraordinary maintenance activities to improve flood conveyance within the Preserve, crews shall be trained by a qualified biologist to identify and minimize harm to beetle habitat and other biologically sensitive areas.

1-1-05-F-0106 - Page 34 Under Valley Elderberry Longhorn Beetle, Direct Effects and 1-1-06-F-0026 - Page 4 Add Valley Elderberry Longhorn Beetle Effects:

The overall effect of this project will result in long-term beneficial effects to the valley elderberry longhorn beetle. The project will restore about 500 acres of habitat for the beetle. This addition of habitat in the area will benefit the listed beetle by increasing population numbers and improving the dispersal abilities of the species. The proposed project may result in short-term adverse effects to the valley elderberry longhorn beetle. Maintenance and operations activities and potential flood-fighting activities may remove elderberry shrubs from the proposed action area.

Mr. Tom Cavanaugh

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1-1-05-F-0106 - Page 35 Under Valley Elderberry Longhorn Beetle, Indirect Effects and 1-1-06-F-0026 - Page 4 Add Valley Elderberry Longhorn Beetle Effects:

Indirect effects may occur if maintenance and flood-fighting activities alter the terrain, such as driplines, which may adversely affect elderberry bushes. Vehicles and construction equipment may leak hazardous substances such as motor oil and antifreeze. Although the quantity leaked by a given vehicle or engine may be minute, these substances can accumulate on roads or in parking lots and then get washed into the adjacent environment by runoff during rain storms. A variety of substances could be introduced during accidental spills of materials.

Based on our analysis, the Service has determined the proposed project will result in the establishment of a significant amount of habitat for the valley elderberry longhorn beetle that will be of long-term benefit to this listed animal, and any adverse effects will be temporary and relatively minor in nature.

1-1-05-F-0106 - Page 41 Under Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp, and Valley Elderberry Longhorn Beetle Change the Last Sentence to Read:

Therefore, the Service estimates that all vernal pool fairy shrimp and vernal pool tadpole shrimp inhabiting 9.14 acres of vernal pool habitat and all beetles inhabiting elderberry bushes within the 639 acre project site will be taken as a result of the proposed project.

1-1-06-F-0026 - Page 4 Change Paragraph #2 to Read:

The Service anticipates that all valley elderberry longhorn beetles inhabiting elderberry bushes within the 639 acre project site will be taken as a result of the proposed project.

The other portions of the project descriptions, species baselines, effects analysis, conclusions, reasonable and prudent measures, terms and conditions, and conservation recommendations in the August 10, 2005, and January 9, 2006, biological opinions remain the same.

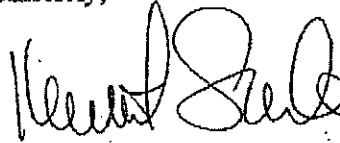
This concludes formal consultation with the Corps on the amended Feather River, Bear River, and Western Pacific Interceptor Canal Levee Improvements Project. As provided in 50 CFR §402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending re-initiation.

Mr. Tom Cavanaugh

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Please contact Jennifer Hobbs, or Holly Herod, the Sacramento Valley Branch Chief, of my staff at (916) 414-6645 if you have questions regarding this amendment to the biological opinion for the Feather River, Bear River, and Western Pacific Interceptor Canal Levee Improvements Project.

Sincerely,



Kenneth Sanchez
Acting Field Supervisor

cc:

Anne King, EDAW, Sacramento, California
Ian Drury, California Department of Fish and Game, Ranch Cordova, California
Paul Brunner, Three Rivers Levee Improvement Authority, Marysville, California
Nancy Haley, Jones and Stokes Associates, Sacramento, California

Attachment F

**Department of the Army
Corps of Engineers
Clean Water Act Section 404
Permit 200400685
July 17, 2006**



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIF. 95814-2922

RECEIVED

JUL 20 2006

ADMINISTRATION

July 17, 2006

Regulatory Branch (200400685)

Paul Brunner
Three Rivers Levee Improvement Authority
915 Eighth Street, Suite 115
Marysville, California 95901

Dear Mr. Brunner:

We are enclosing your copy of Department of the Army Permit 200400685. Please note you are only authorized to complete the work described in the permit.

If you sell the property associated with this permit, the terms and conditions of this permit will continue to be binding on the new owner. To validate the transfer of this permit, have the succeeding party sign the permit transfer section at the end of the permit and forward a copy to this office, along with their printed name, address, telephone number, and other contact information.

The time limit for completing the work is specified in General Condition 1. If the work will not be completed prior to that date, you may request a time extension. Your request for an extension must be received by this office for consideration at least 30 days before the time limit date.

Please refer to identification number 200400685 in any correspondence concerning this project. If you have any questions, please contact Andrea Jones at our Sacramento Valley Office, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email Andrea.J.Jones@usace.army.mil, or telephone 916-557-7745. You may also use our website: www.spk.usace.army.mil/regulatory.html.

Sincerely,

Kevin J. Roukey
Chief, Central California/Nevada Section

Enclosure

Copies with permit furnished (without attachments):

Cindy Davis, EDAW, Incorporated, 2022 J Street, Sacramento, California 95814
Nancy Haley, Jones and Stokes, 2600 V Street, Sacramento, California 95818-1914
Ric Reinhardt, MBK Engineers, 2450 Alhambra Blvd., Suite 2, Sacramento, California, 95817
Jim Sandner, Chief, Operations Branch, U.S. Army Corps of Engineers, 1325 J Street, Sacramento, California 95814
Milford Wayne Donaldson, California State Historic Preservation Officer, Office of Historic Preservation, P.O. Box 942896, Sacramento, California 94296-0001
U.S. Fish and Wildlife Service, Wetlands Branch, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901
U.S. Fish and Wildlife Service, Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901
Tim Vendlinski, U.S. Environmental Protection Agency, Region IX, Wetlands Regulatory Office (WTR-8), 75 Hawthorne Street, San Francisco, California 94105-3901
Terry Roscoe, California Department of Fish and Game Region 2, 1701 Nimbus Drive, Rancho Cordova, California 95670-4599
Rodney R. McInnis, National Marine Fisheries Service, 650 Capitol Mall, Suite 8-300, Sacramento, California 95814-4706

DEPARTMENT OF THE ARMY PERMIT

Permittee: Paul Brunner, Director
Three Rivers Levee Improvement Authority
915 Eighth Street, Suite 115
Marysville, California 95901

Permit Number: 200400685

Issuing Office: U.S. Army Engineer District, Sacramento
Corps of Engineers
1325 "J" Street
Sacramento, California 95814-2922

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers (Corps) having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below. A notice of appeal options is enclosed.

Project Description:

The purpose of the proposed project is to provide 100-year flood protection to southern Yuba County. Levees along the Western Pacific Interceptor Canal (WPIC), Bear River, and Feather River near the communities of Olivehurst and Linda, do not meet current Corps standards to withstand a 100-year flood event. The applicant proposes to strengthen the WPIC levee system and setback the Bear River northern levee between the WPIC and confluence with the Feather River that will provide 165-year flood protection to the south Yuba County area. There will be approximately 11 acres of direct and 13 acres of indirect impacts to waters of the United States.

All work is to be completed in accordance with the attached plans.

Project Location:

The approximately 1,600 acre project site is located on the Bear River and Western Pacific Interceptor Canal located in Sections 16, 17, 20, 21, 28, 29, 32, and 33 of Township 14 North, Range 4 East and Sections 4, 9, 17, 18, 19, 20, and 29 of Township 13 North, Range 4 East, MDB&M, Latitude 038 56' 35.5", Longitude, 121 34' 15.9", Yuba County, California.

This permit shall supersede the individual permit for Stage 1 (signed by the Authority on September 29, 2005) and the June 2, 2006 Nationwide 27 authorization for Stage 2 when this permit is signed by the Corps.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on October 1, 2011. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. To mitigate for the direct loss of

2.7 acres of vernal pools

6.0 acres of riparian habitat

2.6 acres of emergent wetland

5.3 acres of other waters of the United States

252 acres of other waters of the Bear River floodway for
orchard removal

and temporary impacts to

0.4 acres of vernal pools

0.7 acres of riparian habitat

13.0 acres of other waters of the United States

you shall create

9.1 acres of vernal pools

and restore

639 acres of the Bear River floodway in the setback area as depicted on the attached
drawing entitled "Setback Levee Restoration Plan", dated November 15, 2005.

The purpose of the off-site and on-site preserves are to insure that the functions and
values of the aquatic ecosystem are protected.

a. You shall construct the compensatory mitigation prescribed by the preserve plan by
October 1, 2007.

b. To insure that mitigation is completed as required, you shall notify the District
Engineer of the start date and the completion date of the mitigation construction, in writing and
no later than ten (10) calendar days after each date.

2. You shall develop a final comprehensive mitigation and monitoring plan for both the
on-site and off-site preserves, which must be approved by the Army Corps of Engineers by
January 1, 2007. The plan shall include mitigation location and design drawings, vegetation
plans, including target species to be planted, and final success criteria, presented in the format of
the Sacramento District's Habitat Mitigation and Monitoring Proposal Guidelines, dated
December 30, 2004. The purpose of this requirement is to insure replacement of functions and
values of the aquatic environment that would be lost through project implementation.

3. To insure that the on-site mitigation is maintained and monitored, a letter of credit in an amount estimated to be the result of the Property Analysis Record (PAR), shall be submitted to our office by **August 25, 2006**.

4. To assure the completion of compensatory mitigation measures, the permittee shall create an escrow account with a Federally approved surety for the approximate cost of the creation, preservation, monitoring and long-term maintenance of the preserve sites containing waters of the United States required by this permit. The monies of this account will be expended with joint approval of the applicant and the Corps of Engineers. A draft of the limitations on the escrow account, similar to the Irrevocable Escrow Instructions for off-site mitigation required by the California Department of Fish and Game and U.S. Fish and Wildlife Service, dated September 15, 2005, shall be submitted to this office for review by October 7, 2005. The escrow account shall be created and funded prior to October 21, 2005.

5. To insure long-term viability of mitigation, preservation, and avoidance areas you shall by January 1, 2007:

- a. Establish a fully-funded endowment to provide for maintenance and monitoring of on-site and off-site mitigation, preservation, and avoidance areas.
- b. Designate an appropriate conservation-oriented third part entity to function as preserve manager and to hold the required conservation easements.
- c. Record permanent conservation easements and deed restrictions maintaining all mitigation, preservation, and avoidance areas as wetland preserve and wildlife habitat in perpetuity. Copies of the proposed deed restriction and conservation easement language shall be provided to the Corps of Engineers for approval prior to recordation.

6. To insure that the preserves are properly managed, you shall develop a specific and detailed preserve management plan for the on-site and off-site mitigation, preservation, and avoidance areas. The plans shall be submitted to and specifically approved, in writing, by the Corps of Engineers by January 1, 2007. The plans shall describe in detail any activities that are proposed within the preserve areas and the long term funding and maintenance of each of the preserve areas.

7. To insure mitigation success on the on-site preserve, you shall monitor compensatory mitigation, avoidance, and preservation areas for ten years or until the success criteria described in the incorporated documents describing the mitigation plans are met, whichever is greater. This period shall commence upon completion of the construction of the mitigation wetlands. Additionally, continued success of the mitigation wetlands, without human intervention, must be demonstrated for three consecutive years, once the success criteria have been met. The mitigation plan will not be deemed successful until this criteria has been met.

You shall submit monitoring reports to this office annually for years one through four and bi-annually for years six, eight, and ten, of the monitoring period and for each additional year if remediation is required, by October 1 of each year. The first monitoring report for the on-site preserve is due October 1, 2009.

You shall submit an additional monitoring report to this office at the end of the three-year period demonstrating continued success of the mitigation program without human intervention. The only exception to this last requirement shall be if the three-year period occurs wholly within the ten-year monitoring period. In which case, the ten-year report may be used to meet this requirement.

8. To insure mitigation success on the off-site Daley Ranch preserve, you shall monitor compensatory mitigation, avoidance, and preservation areas for five years or until the success criteria described in the approved mitigation plan are met, whichever is greater. This period shall commence upon completion of the construction of the mitigation wetlands. Additionally, continued success of the mitigation wetlands, without human intervention, must be demonstrated for three consecutive years, once the success criteria have been met. The mitigation plan will not be deemed successful until this criterion has been met.

You shall submit monitoring reports to this office for each year of the five-year monitoring period, and for each additional year, if remediation is required, by October 1 of each year. You shall submit an additional monitoring report at the end of the three-year period demonstrating continued success of the mitigation program without human intervention. The first monitoring report for the off-site preserve is due October 1, 2009.

9. To protect the integrity of the preserves and avoid unanticipated future impacts, no roads, utility lines, trails, benches, equipment or fuel storage, grading, firebreaks, mowing, grazing, planting, discing, pesticide use, burning, or other structures or activities shall be constructed or occur within the on-site and off-site mitigation, preservation, and avoidance areas without specific, advance written approval from the Corps of Engineers.

10. To prevent unauthorized access and disturbance in the on-site preserve, you shall, prior to October 1, 2006, install appropriate signage within 50 feet of the toe of the waterside of the setback levee. Locked gates shall be installed on roads accessing the setback levee and preserve to limit motor vehicle access to the levee and preserve area to maintenance activities. Signs shall be posted on each gate indicating that the area on the other side of the setback levee is a preserve.

To prevent unauthorized access and disturbance in the off-site Daley Ranch preserve, you shall maintain the existing fencing and gates around the property boundary as indicated on the attached drawing entitled "Mitigation Site Location", dated April 18, 2006.

11. To provide a permanent record of the completed mitigation work, you shall provide two complete sets of as-builts of the completed work within the on-site and off-site mitigation, preservation, and avoidance areas to the Corps of Engineers. The as-builts shall indicate changes made from the original plans in indelible red ink. These as-builts shall be provided to this office no later than 60 days after the completion of construction of the mitigation area wetlands.

12. This Corps permit does not authorize you to take an endangered species, in particular vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), giant garter snake (*Thamnophis gigas*), Central Valley spring-run chinook salmon (*Oncorhynchus tshawytscha*), Central Valley steelhead (*Oncorhynchus mykiss*), or designated critical habitat. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (e.g., an Endangered Species Act Section 10 permit, or a Biological Opinion under Endangered Species Act Section 7, with "incidental take" provisions with which you must comply). The enclosed Fish and Wildlife Service and National Marine Fisheries Service Biological Opinions (Numbers 1-1-05-F-0106, dated August 10, 2005 (amended June 16, 2006 (amendment number 1-1-06-F-0101), 1-1-06-F-0026, dated January 9, 2006, 151422SWR05SA20094:HLB, dated July 15, 2005, and 151422SWR20004SA20094:HLB, dated March 2, 2006), contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the Biological Opinion. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached Biological Opinion, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with the incidental take statement in the Biological Opinion, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The Fish and Wildlife Service and National Marine Fisheries Service is the appropriate authority to determine compliance with the terms and conditions of its Biological Opinion, and with the Endangered Species Act. The permittee must comply with all conditions of this Biological Opinion, including those ascribed to the Corps.

13. You must allow representatives from the Corps of Engineers to inspect the authorized activity and any mitigation, preservation, or avoidance areas at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

14. All terms and conditions of the July 29, 2005 Section 401 Water Quality Certification are expressly incorporated as conditions of this permit.

15. You shall have a biologist, who is familiar with seasonal wetlands, open water, and riparian habitats, monitor all construction activities within 250 feet of avoided waters of the United States. The monitor shall ensure no unauthorized activities occur within avoided waters of the United States during project implementation.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

- () Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- (x) Section 404 of the Clean Water Act (33 U.S.C. 1344).
- () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. **Reevaluation of Permit Decision.** This office may reevaluate its decision on this permit at any time the circumstances warrant.

Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

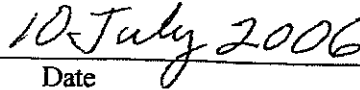
Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. **Extensions.** General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

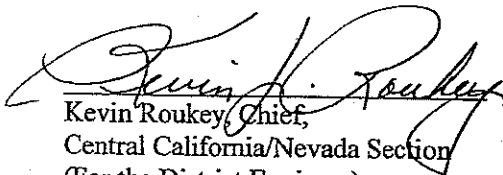


Permittee



Date

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



Kevin Roukey, Chief,
Central California/Nevada Section
(For the District Engineer)



Date

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

Transferee


Date

Attachment G

**Maintenance Comments
Department of Water Resources
Flood Maintenance Office
October 12, 2006**

Memorandum

Date: October 12, 2006

To: Steve Bradley
The Reclamation BoardFrom: Keith Swanson, Chief 
Flood Maintenance Office
Department of Water Resources

Subject: Elderberries at TRLIA's Bear River setback levee

Thank you for sharing the US Fish and Wildlife Service's (FWS) October 1, 2006 update to its biological opinion on the Three Rivers Levee Improvement Authority's (TRLIA) Bear River setback levee. We appreciate the efforts that the Board, TRLIA, and FWS are making to assure that floodplain restoration as part of this project is done in a way that achieves both flood control and fish and wildlife objectives. Concerns remain about some aspects of the project, but we are hopeful that they can be resolved by continuing the cooperation FWS, TRLIA, and others have shown in addressing our reservations.

FWS' Biological Opinion on Elderberry Plantings.

The FWS' updated biological opinion provides most of the assurance DWR sought that maintenance of the channel for the flood conveyance purposes can occur without requiring additional compensatory mitigation for removing or transplanting elderberries. Our understanding of the combined effects of the BO and its various amendments is that they allow elderberries to be routinely removed from the levees, the maintenance area adjacent to them, and the grassland/savannah habitat designed for its low roughness characteristics (N value), and, if necessary for meeting required flood conveyance parameters, from other habitat areas well, subject only to these conservation measures:

- Areas temporarily disturbed that do not require continued management would be restored to the original vegetation species mix.
- Access routes, staging areas, and all project activities (including maintenance) should be chosen in a manner that will cause the least damage to elderberry habitat. Removal of elderberry shrubs should be limited to the minimum needed to achieve flood conveyance requirements. A qualified biologist familiar with elderberry shrubs will have authority to choose access routes.
- Prior to extraordinary maintenance to improve flood conveyance, crews shall be trained to identify and minimize harm to beetle habitat and other biologically sensitive areas.

No additional elderberry planting to compensate for removals for these purposes would be required.

If our understanding is correct, a key DWR reservation about this planting will have been addressed. It would be important for FWS to confirm this understanding, which we have derived from our own reading of four separate FWS documents.

A remaining DWR concern is the duration of these assurances and whether they run with the land and so are enjoyed by anyone doing maintenance there, including DWR, or whether they only go to TRLIA, its successors such as the nonprofit that will be maintaining the restoration area, or other parties specifically named in the BO, which specifically mentions RD 784's levee maintenance but does not name DWR as an agency maintaining the channel. My staff has spoken with the FWS and TRLIA staff about this and they will attempt to clarify this prior to the Reclamation Board meeting.

Other restrictions on vegetation management for flood control purposes.

An additional concern is whether, despite the Biological Opinion, maintenance for flood control purposes by DWR or others may still be hindered by restrictions that agencies other than the Fish and wildlife Service impose on removing elderberries or other vegetation for flood control purposes. This concern was touched upon during the Board's January's meeting, but never fully explored.

The Reclamation Board permit includes multiple conditions that would appear to ensure that vegetation encroaching in the channel can be removed when needed for flood maintenance purposes. Nevertheless, DWR has renewed concerns that provisions of the project's Corps 404 permit or its Wildlife Conservation Board (WCB) funding agreements may limit the effectiveness of these Reclamation Board permits conditions. The Corps permit, for example, requires:

1. Dedication of a conservation easement and deed restrictions approved by the Corps of Engineers dedicating the mitigation and restoration areas as wetland preserves and wildlife habitats in perpetuity.
2. Designation of a conservation-oriented third party to manage the restored floodplain and hold conservation easements over it, and fund an endowment to support the maintenance and monitoring.
3. A detailed preserve management plan for the mitigation and restoration areas.
4. Prohibition of a wide variety of routine channel maintenance activities, including grading, mowing, grazing, discing, pesticide use, or burning within the mitigation or restoration areas without specific advance written approval from the Corps of Engineers.

Careful drafting of the easement, deed restrictions, and preserve management plan, and thoughtful selection and instruction of the third party preserve manager would be needed to avoid potential conflicts between these conservation obligations and flood control project maintenance needs. This would include coordination between the Corps of Engineers' regulatory and flood control functions, so that requirements of the 404 permit are compatible with the flood control maintenance manual and vice versa. The operations and maintenance plan that TRLIA has drafted for these areas, for example, makes a good start towards meeting flood control needs, but would require some revision to assure flood project maintenance can proceed where needed.

We have not seen the conditions that accompanied the funds that were provided for the project by the Wildlife Conservation Board and Department of Fish and Game. Coordination with these agencies is also necessary to ensure that the restoration areas can be maintained in ways that are compatible with flood conveyance.

While one would hope our agencies could achieve this level of coordination as the final documents are drafted, there is much work to do on them before DWR has the assurances it needs that the channel can be maintained as needed for flood control purposes.

Attachment H

Draft Motion to

- 1. Accept USFWS Agreements
(subject to conditions)**
- 2. Modify of Permit No. 17979-BD**
- 3. Delegate Approval to Staff**

Draft Motion:

I move the Board find the US Fish and Wildlife Service agreements; the biological opinions issued as part of the Corps of Engineers' Section 404 Permit, satisfy Special Condition FOURTEEN of Permit No. 17979-BD subject to the following conditions.

1. The US Fish and Wildlife Service confirms incidental take authority of the agreements applies to all agencies with existing or future flood maintenance responsibilities or modifies the biological opinions to include such authority.
2. Special Condition TWENTY-ONE of Permit No. 17979-BD shall be replaced with the following language:

The permittee shall provide the Sacramento and San Joaquin Drainage District, acting by and through The Reclamation Board of the State of California, a permanent easement granting all flood control rights upon, over and across the property to be occupied by existing or newly constructed setback levee reaches prior to granting any other easements. The easement must include the area within the floodway, the levee section, and the area adjacent to the landward levee toe for a width of fifty (50) feet along the setback levee reach and a width of ten (10) feet for existing levee reaches if these areas are not presently encumbered by Reclamation Board easements. For information regarding existing Reclamation Board easements and additional required easements, please contact Jeffery Fong at (916) 657-2831.

3. Add the flowing special condition Permit No. 17979-BD

Special Condition FIFTY-TWO: The permittee shall submit the operations and maintenance manual for the mitigation/restoration area required as a condition of the Section 404 Permit to The Reclamation Board and DWR's Flood Maintenance Office for review and approval prior to final submittal to the Corps of Engineers.

Special Condition FIFTY-THREE: The permittee shall submit proposed revision to the Sacramento River Flood Control Project Operations and Maintenance Manual to The Reclamation Board and DWR's Flood Maintenance Office for review and approval prior to final submittal to the Corps of Engineers.

4. The permittee submits the requested Manning's "n" sensitively analysis and any subsequent hydraulic modeling as may be requested by Board staff to Board staff for review and approval.

Further, the authority to determine compliance with the above conditions, thereby allowing elderberry shrubs to be planted in the Bear River Floodway, be delegated to staff.